



EPA Region 5 Records Ctr.



258546

December 9, 2005

Mr. Nabil S. Fayoumi  
U. S. EPA - Region 5  
77 West Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

**Re: Sauget Area 2 Site – October 3, 2002 Unilateral Administrative Order (UAO) Groundwater Operable Unit  
Monthly Report; November 1 - November 30, 2005 Reporting Period**

Dear Nabil:

Attached is the Monthly Report for the Sauget Area 2 Site October 3, 2002 Unilateral Administrative Order (UAO) - Groundwater Operable Unit. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section XII, paragraph 62, Progress Reports. This report is for the period November 1 – November 30, 2005.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven D. Smith". The signature is fluid and stylized, with a large, sweeping flourish at the end.

Steven D. Smith  
Project Coordinator

cc: Ken Bardo, - U. S. EPA  
Mayor Sauget - Sauget, IL  
Sandra Bron – IEPA  
Mike Coffey - USFWS  
Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)  
Mayor Frank Bergman – Cahokia  
L. Glen Kurowski - Monsanto  
Cathleen Bumb – Solutia  
Linda Tape - Husch & Eppenberger  
Richard Williams – Solutia

## **Sauget Area 2 Site - Sauget, Illinois**

### **October 3, 2002 UAO – Groundwater Operable Unit**

#### **Status Report**

**Date of Report:** December 10, 2005  
**Period Covered:** November 1 - November 30, 2005

#### **Work Performed During the Reporting Period**

##### **General Site Work**

- The Pre-Final Inspection was conducted on June 28, 2005. The only item that was identified as requiring completion before the Final Inspection was a pressure test on the discharge pipeline. That test was successfully completed on July 14<sup>th</sup>. On July 19<sup>th</sup>, the Agency was requested by e-mail to complete a Final Inspection and issue a Construction Complete notice. The Agency responded on August 30<sup>th</sup> requesting the submission of a Technical Memorandum comparing the historical groundwater discharges at the P-Chem Plant with the flow rates from the individual extraction wells. The comparison was intended to be used to determine the appropriate percentage flow difference that should trigger an alarm signaling a problem with the GMCS during system operation. That comparison was submitted on September 12<sup>th</sup>.
- Comments on the Operations and Maintenance Plan that was submitted to the Agency on June 21, 2005 were received on September 20<sup>th</sup>. Those comments are being reviewed and responses will be prepared and submitted.

##### **Groundwater Treatment**

- The second Interim Operating Period began on August 1,, 2005 and continued through October 31<sup>st</sup>. For the entire month of November, the system was operated to maintain the total pumping rate equal to the computed inflow rate, based on the average of the gradients measured in four pairs of piezometers placed immediately upgradient of the Site R landfill.
- During the first three days of the reporting period, well EW-1 was shut down while the pitless adapter was being replaced. Wells EW-2 and EW-3 pumped equal volumes of groundwater during this period. The well as restarted on November 4<sup>th</sup> and well EW-3 was shut down for approximately 3 hours while the

pump was replaced as part of the routine maintenance activities. On November 5<sup>th</sup>, well EW-2 was shut down and the system was programmed so that the other two wells pumped at the same flow rate and this condition was essentially maintained for the rest of the month, with a few minor exceptions associated with maintenance and servicing of the system..

- All of the extraction well pumps were replaced between November 1<sup>st</sup> and November 4<sup>th</sup>, as were all of the pitless adapters..
- Because of frequent tripping of the circuit breaker on well EW-1, the power supply to this well was monitored. Several low voltage spikes were detected in the supply, but no overvoltage spikes sufficient to trip the breaker were noted. The power line was checked for continuity and this suggested that the line was grounding to earth under some conditions. Consequently, the supply line was replaced between October 31<sup>st</sup> and November 3<sup>rd</sup>..
- The results for the first quarter groundwater samples of the performance monitoring wells are being validated. However, the unvalidated results were submitted to the Agency on October 27<sup>th</sup>. The second quarter groundwater samples, as well as the first semiannual sediment and surface water samples, were being analyzed during the reporting period.
- Water level and pumping data for the month of October are attached.

### **Schedule**

The Agency is currently reviewing various submissions to determine if construction is complete.

### **Submittals During Reporting Period**

There were no submittals during the reporting period.

### **Work Scheduled for Next Reporting Period**

- Continue pumping and treating groundwater using the new control program.
- Prepare a report summarizing the results of the Second Interim Operating Period and providing recommendations for the operation of the control system.
- Complete validation of the results of the first quarter groundwater samples from the performance monitoring wells.
- Complete the analyses of the second quarter groundwater samples from the performance monitoring wells and the first semiannual sediment and surface water samples and begin validating these results.
- Obtain third quarter groundwater samples from the performance monitoring wells.

## **PUMPING DATA**

		PUMPING RATE						GROUNDWATER LEVELS							
		Computed													
Date/Time		Q	Total Q	EW-1 Q	EW-2 Q	EW-3 Q	SWL	PZ-5U	PZ-5D	Delta	PZ-6U	PZ-6D	Delta	PZ-7U	PZ-7D
11/1/2005	Daily Average	705.42	706.06	0.10	352.89	353.07	380.43	386.77	385.99	-0.78	386.63	386.57	-0.07	386.67	386.04
11/2/2005	Daily Average	704.31	701.92	0.00	350.94	350.98	380.47	386.73	385.98	-0.75	386.56	386.48	-0.08	386.62	385.99
11/3/2005	Daily Average	744.27	607.36	0.00	307.31	300.05	379.50	386.67	385.86	-0.82	386.54	386.42	-0.12	386.59	385.99
11/4/2005	Daily Average	791.31	759.66	106.60	314.19	338.87	378.93	386.50	385.64	-0.86	386.37	386.24	-0.12	386.45	385.82
11/5/2005	Daily Average	801.41	801.92	400.94	0.00	400.98	379.20	386.29	385.42	-0.87	386.20	386.03	-0.16	386.36	385.73
11/6/2005	Daily Average	825.94	826.50	413.23	0.00	413.27	379.26	386.11	385.20	-0.91	385.99	385.81	-0.17	386.17	385.53
11/7/2005	Daily Average	779.39	724.35	361.47	0.00	362.88	379.26	386.05	385.21	-0.84	385.97	385.84	-0.13	386.16	385.53
11/8/2005	Daily Average	788.15	788.88	394.44	0.00	394.44	379.28	385.97	385.12	-0.85	385.90	385.74	-0.16	386.09	385.46
11/9/2005	Daily Average	803.38	812.99	339.46	134.03	339.50	379.33	385.87	385.02	-0.84	385.77	385.61	-0.16	385.97	385.33
11/10/2005	Daily Average	793.75	795.24	265.11	265.07	265.06	379.53	385.85	385.01	-0.84	385.72	385.57	-0.15	385.93	385.27
11/11/2005	Daily Average	788.52	786.09	316.76	152.48	316.85	378.98	385.79	384.91	-0.89	385.65	385.51	-0.14	385.87	385.24
11/12/2005	Daily Average	810.20	809.29	404.63	0.00	404.66	378.27	385.62	384.71	-0.91	385.54	385.39	-0.15	385.75	385.12
11/13/2005	Daily Average	869.73	867.73	433.86	0.00	433.87	377.76	385.43	384.46	-0.97	385.35	385.16	-0.19	385.55	384.88
11/14/2005	Daily Average	854.05	845.64	418.27	0.94	426.43	377.58	385.42	384.45	-0.96	385.34	385.16	-0.18	385.55	384.90
11/15/2005	Daily Average	811.13	812.29	406.14	0.00	406.15	378.26	385.34	384.40	-0.94	385.29	385.23	-0.06	385.50	384.86
11/16/2005	Daily Average	783.77	784.49	392.25	0.00	392.24	379.61	385.25	384.41	-0.84	385.15	385.00	-0.14	385.33	384.68
11/17/2005	Daily Average	794.63	792.58	396.29	0.00	396.30	378.52	385.17	384.31	-0.86	385.11	384.94	-0.17	385.31	384.67
11/18/2005	Daily Average	812.67	815.07	407.56	0.00	407.51	378.21	385.14	384.23	-0.91	385.07	384.90	-0.16	385.27	384.65
11/19/2005	Daily Average	791.05	789.36	394.66	0.00	394.70	378.82	385.14	384.27	-0.86	385.04	384.89	-0.15	385.25	384.62
11/20/2005	Daily Average	842.50	842.98	421.43	0.12	421.43	378.52	385.05	384.16	-0.89	384.96	384.78	-0.18	385.17	384.48
11/21/2005	Daily Average	756.58	758.16	379.08	0.00	379.08	379.02	385.05	384.23	-0.82	384.95	384.83	-0.12	385.16	384.54
11/22/2005	Daily Average	737.63	737.55	368.78	0.00	368.78	379.38	385.07	384.24	-0.83	384.95	384.80	-0.15	385.12	384.54
11/23/2005	Daily Average	735.24	734.28	367.15	0.00	367.13	379.36	385.15	384.35	-0.80	385.01	384.88	-0.13	385.22	384.62
11/24/2005	Daily Average	762.50	764.65	381.81	1.02	381.82	379.28	384.94	384.15	-0.79	384.82	384.68	-0.14	385.02	384.38
11/25/2005	Daily Average	739.89	738.66	369.33	0.00	369.33	378.75	384.92	384.13	-0.79	384.80	384.68	-0.11	385.01	384.39
11/26/2005	Daily Average	780.13	781.60	390.02	1.53	390.05	378.12	384.87	384.02	-0.85	384.78	384.64	-0.14	384.98	384.36
11/27/2005	Daily Average	770.09	773.03	386.49	0.00	386.54	378.49	384.89	384.04	-0.85	384.77	384.66	-0.11	384.99	384.37
11/28/2005	Daily Average	564.66	575.71	293.87	0.00	294.09	380.79	384.97	384.29	-0.68	384.89	384.95	0.05	385.04	384.46
11/29/2005	Daily Average	605.65	604.00	206.13	95.56	302.32	380.97	384.98	384.34	-0.64	384.82	384.73	-0.09	384.92	384.34
11/30/2005	Daily Average	644.96	642.78	301.73	19.36	321.69	379.77	384.92	384.23	-0.68	384.78	384.65	-0.13	384.93	384.35

Date/Time		Delta	PZ-8U	PZ-8D	Delta	PZ-1_OUTSI DE	PZ-1_INSIDE	PZ-2_OUTSI DE	PZ-2_INSIDE	PZ-3_OUTSI DE	PZ-3_INSIDE	PZ-4_OUTSI DE	PZ-4_INSIDE
11/1/2005	Daily Average	-0.63	386.36	385.15	-1.21	382.54	385.61	379.58	385.38	380.57	384.01	382.34	383.86
11/2/2005	Daily Average	-0.63	386.33	385.14	-1.19	382.59	385.57	379.73	385.34	380.50	383.98	382.41	383.83
11/3/2005	Daily Average	-0.60	386.29	385.00	-1.30	382.12	385.60	378.90	385.40	379.73	384.22	382.01	384.00
11/4/2005	Daily Average	-0.64	386.13	384.74	-1.40	381.71	384.99	378.31	384.95	379.15	383.88	381.59	383.69
11/5/2005	Daily Average	-0.64	386.03	384.66	-1.37	381.77	383.63	378.54	384.54	379.37	384.21	381.63	383.54
11/6/2005	Daily Average	-0.64	385.84	384.43	-1.41	381.63	383.24	378.53	384.24	379.33	383.92	381.47	383.23
11/7/2005	Daily Average	-0.63	385.85	384.49	-1.36	381.65	383.51	378.59	384.41	379.41	384.13	381.55	383.47
11/8/2005	Daily Average	-0.63	385.77	384.43	-1.35	381.61	383.30	378.60	384.26	379.41	384.02	381.49	383.33
11/9/2005	Daily Average	-0.64	385.68	384.28	-1.40	381.46	383.27	378.58	384.04	379.37	383.69	381.42	383.25
11/10/2005	Daily Average	-0.66	385.66	384.31	-1.35	381.29	383.45	378.79	383.91	379.59	383.52	381.54	383.36
11/11/2005	Daily Average	-0.63	385.61	384.27	-1.35	381.36	383.32	378.33	383.97	379.15	383.66	381.32	383.29
11/12/2005	Daily Average	-0.63	385.43	384.02	-1.41	380.93	382.90	377.64	383.88	378.48	383.64	380.88	382.96
11/13/2005	Daily Average	-0.66	385.20	383.71	-1.49	380.52	382.42	377.12	383.53	377.95	383.26	380.46	382.51
11/14/2005	Daily Average	-0.65	385.19	383.72	-1.47	380.48	382.57	377.03	383.62	377.89	383.35	380.46	382.60
11/15/2005	Daily Average	-0.64	385.16	383.67	-1.49	380.65	382.57	377.49	383.60	378.30	383.36	380.59	382.63
11/16/2005	Daily Average	-0.64	385.04	383.71	-1.33	381.27	382.38	378.75	383.41	379.48	383.12	381.14	382.45
11/17/2005	Daily Average	-0.63	385.01	383.66	-1.35	380.83	382.38	377.89	383.42	378.68	383.18	380.77	382.48
11/18/2005	Daily Average	-0.63	384.96	383.56	-1.41	380.60	382.37	377.50	383.39	378.31	383.18	380.53	382.46
11/19/2005	Daily Average	-0.63	384.94	383.58	-1.36	380.87	382.40	378.09	383.39	378.87	383.18	380.80	382.47
11/20/2005	Daily Average	-0.69	384.84	383.43	-1.41	380.68	382.15	377.80	383.19	378.47	382.97	380.59	382.20
11/21/2005	Daily Average	-0.61	384.88	383.56	-1.32	380.95	382.37	378.25	383.37	379.09	383.19	380.84	382.42
11/22/2005	Daily Average	-0.58	384.85	383.61	-1.24	381.11	382.40	378.59	383.36	379.34	383.12	381.02	382.42
11/23/2005	Daily Average	-0.61	384.96	383.70	-1.26	381.17	382.58	378.65	383.52	379.40	383.32	381.11	382.62
11/24/2005	Daily Average	-0.64	384.75	383.46	-1.29	380.97	382.14	378.45	383.16	379.17	382.88	380.87	382.20
11/25/2005	Daily Average	-0.61	384.75	383.46	-1.29	380.76	382.27	378.05	383.25	378.82	382.99	380.73	382.29
11/26/2005	Daily Average	-0.62	384.69	383.34	-1.36	380.41	382.19	377.46	383.18	378.22	382.97	380.40	382.25
11/27/2005	Daily Average	-0.62	384.70	383.34	-1.36	380.58	382.23	377.75	383.21	378.48	383.00	380.51	382.26
11/28/2005	Daily Average	-0.58	384.78	383.98	-0.79	381.65	382.70	379.72	383.52	380.40	383.26	381.48	382.61
11/29/2005	Daily Average	-0.58	384.72	383.77	-0.95	381.84	382.93	380.04	383.46	380.70	382.93	381.70	382.43
11/30/2005	Daily Average	-0.59	384.70	383.71	-0.99	381.28	382.65	379.00	383.39	379.72	383.08	381.24	382.44